

MONTANA CLEAN ENERGY AND TRANSMISSION DEVELOPMENT













Montana is energy country. Our world class energy resources—wind, oil and gas, biofuels, biomass, geothermal, significant amounts of coal and more—are second to none in the United States and provide us with the opportunity to help the world with global climate change and help the nation wean itself from unfriendly energy sources while creating economic growth opportunities here at home. Our addiction to unfriendly oil is of grave concern to all Americans and Montana is positioned to be a leader in breaking that addiction. Montana can and will provide a large share of the energy resources North America needs.

At the forefront of our significant energy resources is wind. Since 2005, Montana has increased our wind energy output at the fastest rate in the nation and we're not slowing down. Currently, over 50 wind projects are in various stages of development which could total over 5,000 MW of clean, Montana wind energy. But the success of this significant wind energy production is dependent upon new and upgraded transmission systems. In Montana, the good news is that we have six major transmission projects under study and development which can deliver about 8,550 MW of new electricity capacity from planned and future Montana clean energy projects. This level of wind industry and transmission line growth is a clear indication that industry is willing to make the necessary investments to see these projects through to fruition. All these infrastructure projects are actively advancing at various stages of development and are being carried out by diverse entities including Montana's largest investor owned utility, federal power marketing agencies and private merchant transmission developers. The state of Montana and its transmission development partners are rising to the challenge to develop a 21st century transmission system designed to transport some of the nation's best wind and renewable energy to growing markets.



HIGH CAPACITY, HIGH VOLTAGE INTERSTATE LINES

MOUNTAIN STATES TRANSMISSION INTERTIE (MSTI) ■

NorthWestern Energy (NWE) is currently in the final stages of permitting of the planned Mountain States Transmission Intertie (MSTI) 500 kV transmission line and expects to obtain the certificate of compliance from the Montana Department of Environmental Quality by the fourth quarter of 2010. A new Open Season is planned for the spring of 2010. NWE plans to construct, operate and maintain the line to address the requests for transmission service from customers and to relieve constraints on the high-voltage transmission system in the region. The MSTI Project would provide a vital transmission solution for potential Montana wind generation to be directed to demand centers in the Pacific Northwest (Northern California, Oregon, and Washington) and the Southwest (Southern California, southern Nevada, and Arizona). The new 1,500 MW transmission line would begin at a new substation, in southwestern Montana about five miles south of the town of Townsend. The line would proceed south into southeastern Idaho connecting to Idaho Power Company's (IPCO) existing Midpoint Substation, 10 miles north of Jerome, Idaho and is expected to be placed into service in 2015. This line ties into the existing high-voltage transmission system and other new transmission projects in development in the intermountain west.

CHINOOK |

The Chinook project is a 1,000 mile, 500 kV HVDC (High Voltage Direct Current) transmission line that will originate from a collection point near Harlowton, Montana,

cross southeastern Idaho, and terminate south of Las Vegas in the Eldorado Valley. From this point, other transmission systems will move the energy to California, southern Nevada, Arizona and other southwestern markets. The Chinook project, being developed by TransCanada, is estimated to cost approximately \$3 billion, is scheduled to commence operations in early 2015, and is designed to carry 3,000 MW to market.

The Chinook transmission line would address an important need throughout North America by providing high-capacity electrical connections from the remote, energy-rich regions of Montana to the more populous developed and growing regions in the U.S. southwest. Existing and proposed state and national renewable portfolio standards (RPS) requiring increased production of energy from renewable sources along with the transition to hybrid and plug-in electric vehicles will result in increased demand for wind generation. The Chinook project will make a significant contribution to the Western states' economies, the environment, and the power industry by facilitating the development of the high quality renewable energy resources in Montana.

TONBRIDGE/MONTANA ALBERTA TIE, LTD. (MATL) ■

Montana Alberta Tie Ltd. (MATL) is a fully-permitted and financed 214-mile, 230 kV transmission line that will interconnect the electricity markets of Alberta and Montana. It will be the first power transmission line between Alberta and Montana and is permitted to carry 300 MW of power in each direction. It is expected to be in operation by the end of 2011. The MATL line will run from an exist-

ing NorthWestern Energy substation near Great Falls, Montana to one outside of Lethbridge, Alberta. It will allow much-needed energy flow in both directions, ensuring more reliable supplies of electricity, which will make both Montanans and Albertans less vulnerable to power outages.

Northern Montana and southern Alberta are home to some of the best wind energy sources in North America. Among all of the United States, Montana is rated second for wind-energy potential. The MATL line will enable the development of new wind-energy projects by linking this renewable and emission-free source of power to consumers across North America.

GRASSLANDS RENEWABLE ENERGY, LLC, WIND SPIRIT PROJECT ■■

As part of the larger Wind Spirit Project Grasslands Renewable Energy is proposing a series of integrated, interconnected highvoltage transmission lines from Montana to other markets. These lines will enable the development and export of a minimum of 3000 MW of wind energy from Montana and integrate with the proposed Grasslands collector system. The Wind Spirit Project offers an innovative solution to renewable energy development by aggregating wind from geographically dispersed areas, firming the energy with one or more energy storage applications, and marketing the energy through a single entity. Grasslands is developing three separate 230 kV AC lines that will connect Montana with markets in Alberta, Saskatchewan and Wyoming. A highvoltage 500 kV DC line will connect Montana and North Dakota. This DC line will provide a crucial link between the Eastern and Western transmission grids allowing greater flexibility in marketing and enhanced system integrity. By aggregating wind and energy storage, and integrating the transmission into other existing and proposed transmission lines, the Wind Spirit Project will be able to maximize the use of transmission, enhancing the economics of related transmission and wind developments. The Wind Spirit Project will allow Montana to become a national leader in wind energy development. Grasslands is beginning the regulatory phase of its developments in late 2009.

Wind Collector and other lines

COLSTRIP 500 KV UPGRADE ■

NorthWestern, the Bonneville Power Administration (BPA), and the other Colstrip Transmission System owners, have completed initial technical studies to increase the existing 500 kV transmission system by up to 700 MW. This system extends from Colstrip in eastern Montana to the Pacific Northwest. The line east of Townsend, MT is owned by NorthWestern and its partners while the line west of Townsend is owned by the BPA. The Montana 500 kV transmission system is used to move the existing coal-fired Colstrip generation to the Northwest, of which approximately 70% is exported to serve population centers outside of Montana. The upgrade is currently being studied in greater detail to identify specific facilities required and the plan of service. The upgrade is anticipated to serve the export market as well by moving renewable power to growing markets.



NORTHWESTERN ENERGY COLLECTOR SYSTEM

The proposed NorthWestern Energy Collector Project will be up to five generator lead lines (i.e. collector lines) that originate in the high wind areas of Montana and move renewable wind energy south to a new 500 kV substation at Townsend, Montana. An Open Season in early 2010 will determine the number and location of each generator lead line. The new Townsend substation will connect the generator lines to the existing twin 500 kV lines that traverse Montana from east to west and to NorthWestern's proposed MSTI project. At Midpoint, MSTI customers will have access through existing and proposed new transmission to customers throughout the west. The proposed Collector project and MSTI project would provide a key pathway for Montana wind generation to be directed to demand centers in the Pacific Northwest, the Southwest and southern California.

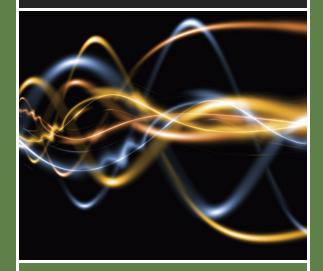
GRASSLANDS RENEWABLE ENERGY, LLC, WIND SPIRIT PROJECT

Grasslands Renewable Energy's Wind Spirit Project is an integrated transmission solution for large-scale development of renewable energy in Montana and the Northern Plains.

The Wind Spirit Project will collect a minimum of 3,000 megawatts of wind and other renewable energy sources through a series of 230 kV AC and HVDC transmission collector lines. The transmission feeder system will harness wind from geographically dispersed areas, firm the energy with one or more energy storage applications, and create a unified marketing entity for the involved renewable energy projects. The integrated system will be able to manage the intermittent wind resource to deliver 1,000 MW of consistent power to population centers.

The Wind Spirit Project will feed into and be complimentary with other trunk line transmission projects in the region. Wind Spirit is beginning its regulatory phase in the Fall of 2009.

MONTANA MEANS BUSINESS





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